

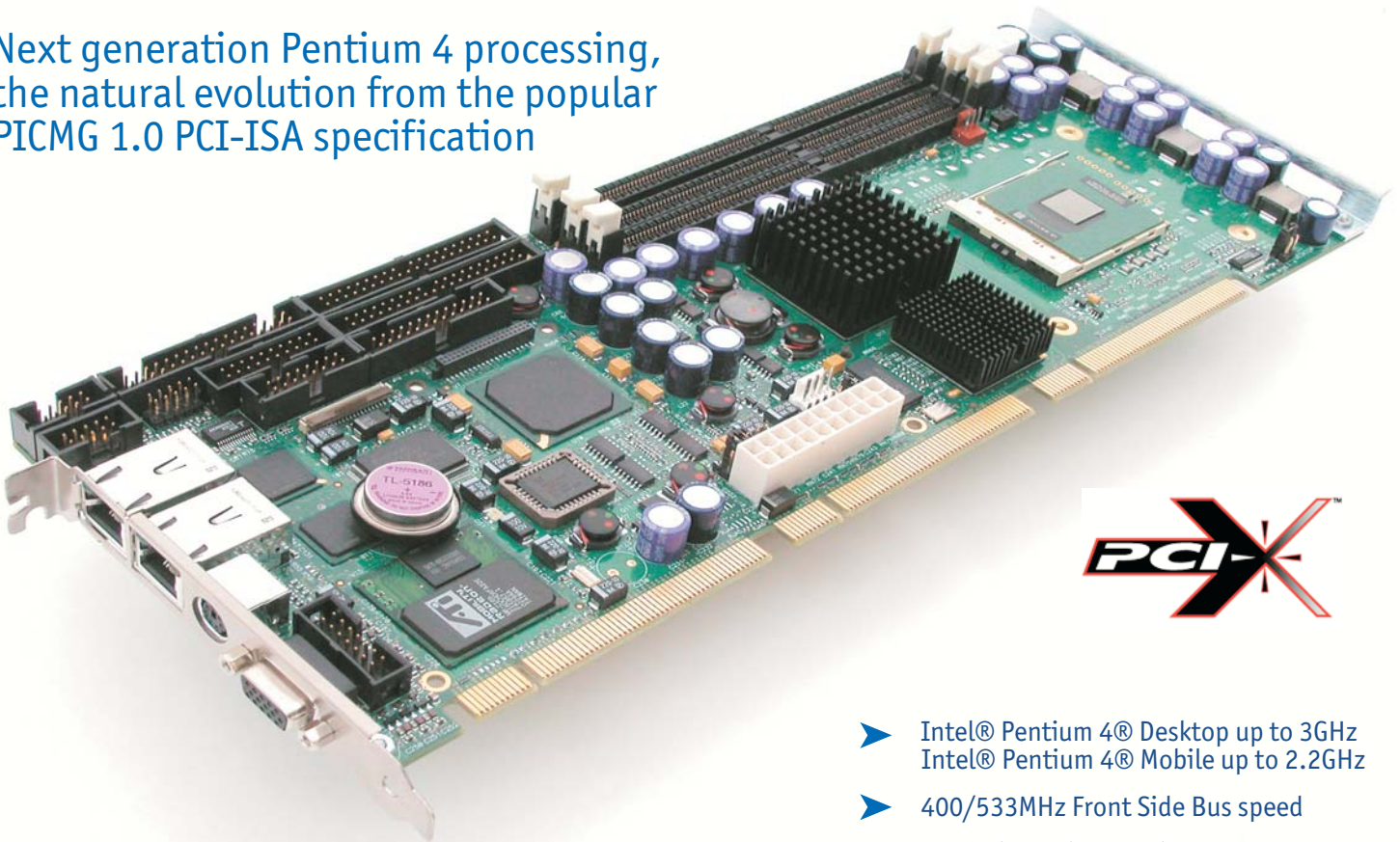
ePCI-200

Intel® Pentium® 4

Dual Bus PICMG 1.2

(ePCI-X) SHB

Next generation Pentium 4 processing,
the natural evolution from the popular
PICMG 1.0 PCI-ISA specification



The ePCI-200 will reach new levels of performance in PICMG CPU boards.

It comes standard with a rich set of features including the latest generation 478-pin processor technology, PCI-X support up to 133MHz, up to 3Gig of DDR SDRAM, an onboard ATI Mobility™ Radeon™ with integrated 16MB of DDR SDRAM and a dual Fast Ethernet controller. Additional features include two USB ports, a floppy controller, two serial ports, a parallel port, PS/2 keyboard and mouse ports, a hardware monitor and a dual stage watchdog timer.

This generic single board computer is targeted at a broad range of applications requiring a high performance processing with a good graphic solution in a PICMG environment (where ISA bus support is not necessary). Those requirements can be found for applications in most of the markets: automation, communications, medical and military.

- Intel® Pentium 4® Desktop up to 3GHz
Intel® Pentium 4® Mobile up to 2.2GHz
- 400/533MHz Front Side Bus speed
- Two independent PCI busses
 - BUS A: PCI 32-bit 33MHz
 - BUS B: PCI 64-bit 33MHz up to PCI-X 133MHz
- Up to 3 GB of PC2100 (266) DDR SDRAM on 3 DIMM memory modules
- Dual 10/100BaseT-TX Ethernet with automatic crossover
- ATI® Mobility™ Radeon™ 3D dual-screen video controller (16MB DDR SDRAM)
 - Standard VGA output on bracket
 - TV-Out or second VGA on 14-pin header

Specifications

... learn about the tremendous feature set

Processor

- Supports mPGA478 socket Intel® Pentium® 4 processor up to 3GHz
- 512KB Advanced Transfer Cache (on-die, full speed L2 cache with ECC)

•BUS Interfaces

- CPU Front Side Bus at 400/533MHz
- Bus A: 32-bit PCI at 33MHz, universal keying
- Bus B: 64-bit PCI-X up to 133MHz, 3.3V-only

Memory

- Up to 3 GB on 3 x 184-pin latching DIMM sockets of registered PC2100/266 DDR SDRAM (2.5V, ECC support)

Data Path

- 64-bit on CPU; 32-bit and 64-bit on PCI busses

Flash Memory

- 512KB for BIOS field upgrade

I/O

I/O controller	National PC87417 super I/O
USB Ports	Two (USB 1.1 compliant)
Serial Ports	Two (One RS-232, second configurable as RS-232/RS-422/485)
Parallel Port	One bi-directional with all IEEE 1284 protocols supported with BIOS selectable IRQs and addressing
ATA/IDE	Ultra DMA/100, support for four IDE drives (in master/ slave configuration); PIO Mode 4, Bus Master IDE or synchronous DMA mode transfer up to 100MB/s
Floppy Disk	Support for one drive
Ethernet	Two PCI 10/100Base-TX (Intel 82551ER) with automatic crossover
CompactFlash	Supports CompactFlash disk module (on secondary channel)

Video

- **ATI Mobility Radeon M6-C16H**
- 2D/3D graphics up to 1600 x 1200 x 32-bit
- Dual-Head monitor support
- TV Output

Connectors

- Faceplate
CRT (female DB-15)
Ethernet (two RJ-45 with link/activity indicators
Keyboard / Mouse (6-pin female minidin)
- Headers
3-pin locking: CPU fans (1) 4-pin ATX type : CPU power
10-pin shrouded : Serial ports (2) 10-pin : Dual USB (1)
14-pin shrouded: TV-Out second VGA 16-pin shrouded : Multifunction
20-pin shrouded : System monitor (1) 20-pin : ATX power supply (1)
26-pin shrouded : Parallel port (1) 34-pin shrouded : Floppy (1)
40-pin T069 :CFIash module (1) 40-pin shrouded : ATA/IDE (2)
16-pin shrouded : AT keyboard, speaker, PS/2 mouse, reset, hard disk and activity LED

BIOS

- Phoenix BIOS in Boot Block Flash with recovery code; save CMOS in Flash option, and boot from LAN and USB capability
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- All onboard peripherals (except VGA en/dis by jumper) can be enabled or disabled by software
- Diskless, keyboardless, and videoleless operation extensions. Keyboardless and videoleless operation need console redirection
- System, video and LAN BIOS shadowing
- DMI & HDD S.M.A.R.T. support
- Advanced Configuration and Power Interface (ACPI 1.0)
- Intelligent System Monitoring (chassis intrusion and advanced thermal management such as resume, overheat protection and auto slow down)
- ATX support with SOFTOFF software enable/disable

Supervisory

- Two-stage software programmable watchdog timer, time out from 16 msec to 4.5 min
- Silicon Serial ID TAG for unique board identification accessible via software
- Hardware system monitor (voltages, temperature, monitoring of 6 external fans), CPU temperature monitor / alarm; board temperature sensor, power failure / low battery detector, and two end-user defined open-drain general purpose I/Os; SMBus

OS Compatibility

- Windows® XP, Windows ® 2000, Linux, FreeBSD, QNX 6.2.1

Mechanical

- 338 x 130 x 40 mm at CPU / fan (13.33 x 4.80 x 1.6 in. at CPU / fan)
- Conforms to PICMG 1.2 (ePCI-X) r1.0

Power Requirements

- Supply Voltage Vcc =+3.3V ±5%, +5V ±5%, +12V ±5%
- ICC typ.* +5V: 3.2 A ICC max.** 6.24 A
- ICC typ.* +3.3V: 1.5 A ICC max.** 2.7 A
- ICC typ.* +12V: 2.2 A ICC max. ** 6 A
- * Measured with 2.0GHz CPU and 1GB of 266MHz DDR SDRAM @50% duty cycle.
- ** Measured with 2.8GHz CPU and 2GB of 266MHz DDR SDRAM.

Environmental

	Operating	Storage and Transit
Temperature :	0 to 45°C / 32 to 113°F* 0 to 50°C / 32 to 122°F**	-40 to +70°C / -40 to 158°F
Humidity:	5% to 90% @ 40°C/104°F non-condensing	5% to 95% @ 40°C/104°F non-condensing***
Altitude:***	4,000 m / 13,123 ft	15,000 m / 49,212 ft
Shock:***	5G each axis	Bellcore GR-63-CORE Section 4.3
Vibration:***	5-500Hz, 1G, each axis	5-50Hz, 2G; 50-500Hz, 3G each axis

* With Desktop 2.8GHz, 2GB of 266MHz DDR SDRAM and 200 LFM
** With Mobile 1.7GHz, 2GB of 266MHz DDR SDRAM and 200 LFM
*** Designed to meet or exceed.

Reliability

- MTBF: > 150 000 hours @ 30°C / 86°F (Telcordia SR-232, Issue 1)
- USB and mouse / keyboard voltage protected by self-resetting fuses
- Unique silicon serial number accessible via software
- 2-year limited warranty

Designed to meet or exceed:
Safety : UL 60950; CSA C22.2 No 60950-00; EN 60950; IEC 60950
EMI/EMC: FCC 47 CFR Part 15/CISPR22, Class B; CE Mark to EN55022/EN55024

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